



Success Story



Aviation + Wildlife + IR Camera + Red Hen = Success!



John Romero, founder of Owyhee Air Research is a lucky man. He gets to combine his love of aviation with his passion for wildlife biology, and run his own business with the woman he loves—his wife, Cathy! And thanks to Red Hen Systems, he is now getting more business than ever!

Background

With a degree in Wildlife Biology, experience in the Air National Guard, and 21 years as a commercial pilot, it's only natural that John Romero would start his own company, catering to wildlife research. Eight years ago, he and his wife Cathy, founded **Owyhee Air Research** (pronounced oh-WYE-hee).

John and Cathy Romero run their company in Nampa, Idaho. With 7 employees and 4 aircraft, they specialize in aerial wildlife data acquisition. They work with federal and state agencies, as well as private consultants, tracking and analyzing animal movements and populations —everything from wolves and wolverines, to bats and blue jays.

Operation

To video the animals beneath the flight path, their pilots typically fly over designated areas at low altitude (500-1000 feet) and then provide the video footage to clients. At the beginning of their career, Owyhee Air Research took high-quality color photos of wildlife, but later moved to shooting infrared videos using the FLIR high-end infrared camera. This camera let them see small animals and birds up to a mile away and provided infrared images that were amazingly clear and defined, much like images you would see on a regular video.

Problem

No matter how good the quality of their photos or videos, Owyhee Air Research often heard comments like these from their clients: “Nice photos, but where are they located?” “Wait! You need to tell us where those critters are!”

So here was Owyhee Air Research, the first people in the world to be able to detect an animal as small as a sage grouse from the air using their special FLIR camera ... but they could not determine exactly where it was. Their clients desperately needed that GPS location to do their statistical analysis. And that's when Owyhee Air Research realized, “We need precise geo-referenced media!”

Red Hen Systems

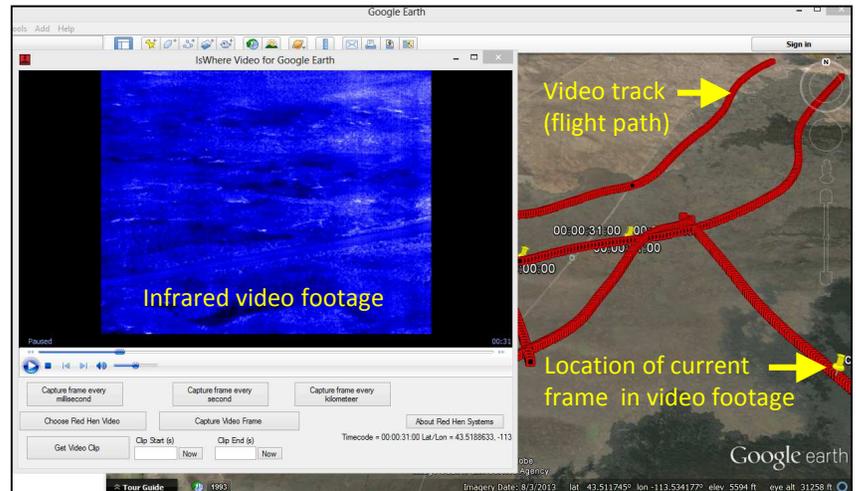
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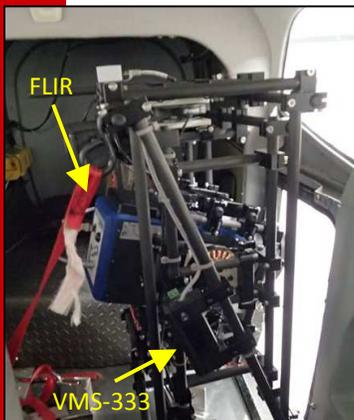
Solution

When Owyhee Air Research first contacted Red Hen, they were using still cameras to take photos. So, they purchased Red Hen's Blue2Can attachment for their cameras to geo-reference still photos. But once they moved to infrared video, they needed something different, and fortunately they found it: Red Hen's VMS-333.

The **VMS-333** connects to the FLIR (Forward Looking Infra Red) camera that captures the infrared video. The VMS-333 processes the video and geo-tags it. Pilots can simply press a button to note points of interest on the ground, as well as make audio comments about what was seen. Owyhee Air Research especially likes the fact the VMS-333 video output file is a standard MPEG file that can be shared with clients without any conversion.



(a) The isWhere screen on the left shows an infrared video identifying lava beds where caves for potential bat habitat exist; (b) Google Earth screen on the right shows the location of video track.



Gimbal mount holding the FLIR camera steady

Owyhee Air Research also uses **isWhere** software to view those videos before sharing them with their clients. Says John, "With isWhere, we can see our video track on Google Earth while we watch the video, which means we can match up our video with its location on earth. Very cool! Now we know exactly where all those 'critters' are!"

Because the company's clients need to know exactly where animals are located, the camera must remain stationary in flight, because any movement could disrupt the accuracy of the location. That's where Red Hen's new **Gimbal camera mount** comes in handy. This special mount directs the camera exactly where John needs it and keeps the camera absolutely still; aircraft movement has no effect on it at all. According to John, "The mount is controlled by software and is accurate to within 2/10ths of a degree. That's phenomenal!"

Benefits

John's own words say it all: "Red Hen products give us confidence in the data we provide our clients, which means our clients trust the accuracy and quality of our work. This trust is important, since what we are doing (IR videography) is relatively new. The more work we do in this area, the more word is starting to spread, and our business is expanding. In fact, it looks like we might need to start working with helicopters and purchase another FLIR, another VMS-333, and another Gimbal mount!"

To learn more about Owyhee Air Research:
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